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This is a continuation patent application of Serial Number 09/576,647, filed on May 22, 2000, entitled "PUSH-PULL CONFIGURATIONS FOR SEMICONDUCTOR DEVICE HAVING A PN-JUNCTION WITH A PHOTSENSITIVE REGION," which is a continuation-in-part patent application of Serial Number 09/532,581, filed on March 22, 2000, entitled "SEMICONDUCTOR DEVICE HAVING A PN-JUNCTION WITH A PHOTSENSITIVE REGION," which are incorporated herein by reference.

In the Claims

A clean version of the entire set of pending claims as amended by this Response is presented on the following page.

Claims 1-12 are canceled.

Claims 13-30 are added.

Clean Version of the Entire Set of Pending Claims

1 13. A device, comprising:
2 a first sub-device comprising:
3 a p-doped substrate;
4 a first n-doped region situated within said p-doped substrate;
5 a first p-doped region situated within said p-doped substrate;
6 and
7 a first photosensitive region situated between said first n-doped
8 region and said first p-doped region, within said p-substrate; and
9 a second sub-device comprising:
10 an n-doped substrate;
11 a second n-doped region situated within said n-doped
12 substrate;
13 a second p-doped region situated within said n-doped
14 substrate; and
15 a second photosensitive region situated between said second n-
16 doped region and said second p-doped region, within said n-substrate,
17 wherein said first p-doped region is electrically coupled to said second n-
18 doped region.

1 14. The device of claim 13, wherein said first n-doped region is
2 electrically coupled to a positive power supply rail.

1 15. The device of claim 14, wherein said first n-doped region is
2 electrically coupled to said positive power supply rail by way of a first
3 resistive element.

1 16. The device of claim 13, wherein said second p-doped region is
2 electrically coupled to a negative power supply rail.

1 17. The device of claim 16, wherein said second p-doped region is
2 electrically coupled to said negative power supply rail by way of a resistive
3 element.

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1 18. The device of claim 13, wherein said first n-doped region is
2 electrically coupled to said positive power supply rail by way of a first
3 resistive element, and said second p-doped region is electrically coupled to
4 said negative power supply rail by way of a second resistive element.

1 19. The device of claim 13, wherein said first p-doped region and
2 said second n-doped region are electrically coupled to a ground potential
3 rail.

1 20. The device of claim 13, further comprising a fiber optic channel
2 coupled to said first and second photosensitive regions.

1 21. A device, comprising:
2 a first sub-device comprising:
3 a p-doped substrate;
4 a first n-doped region situated within said p-doped substrate;
5 a first p-doped region situated within said p-doped substrate;
6 and
7 a first photosensitive region situated between said first n-doped
8 region and said first p-doped region, within said p-substrate; and
9 a second sub-device comprising:

10 an n-doped substrate;
11 a second n-doped region situated within said n-doped
12 substrate;
13 a second p-doped region situated within said n-doped
14 substrate; and
15 a second photosensitive region situated between said second n-
16 doped region and said second p-doped region, within said n-substrate,
17 wherein said first p-doped region is electrically coupled to said second p-
18 doped region.

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22. The device of claim 21, wherein said first p-doped region is
electrically coupled to said second p-doped region by way of a resistive
element.

23. The device of claim 21, wherein said first n-doped region is
electrically coupled to said second n-doped region.

24. The device of claim 23, wherein said first n-doped region is
electrically coupled to said second n-doped region by way of a resistive
element.

25. The device of claim 21, wherein first p-doped region is
electrically coupled to said second p-doped region and said first n-doped
region is electrically coupled to said second n-doped region.

26. The device of claim 25, wherein said first p-doped region is
electrically coupled to said second p-doped region by way of a first resistive
element and said first n-doped region is electrically coupled to said second
n-doped region by way of a second resistive element.

1 27. The device of claim 26, wherein said first p-doped region is
2 electrically coupled to a ground potential rail, and said second n-doped
3 region is electrically coupled to a positive power supply rail.

1 28. The device of claim 13, further comprising a fiber optic channel
coupled to said first and second photosensitive regions.

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1 29. A device, comprising:
2 a first sub-device comprising:
3 a first p-doped region;
4 a first n-doped region; and
5 a first p-doped photosensitive region to control a first current
6 flowing from said first n-doped region to said first p-doped region in
7 response to an optical signal; and
8 a second sub-device comprising:
9 a second p-doped region;
10 a second n-doped region; and
11 a second n-doped photosensitive region to control a second
12 current flowing from said n-doped region to said second p-doped region in
13 response to said optical signal.

1 30. The device of claim 29, further comprising a fiber optic channel
2 to carry said optical signal, said fiber optic channel being coupled to said
3 first and second photosensitive regions.